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**Reply To Examiner's Remarks**

Claims 1, 3, 8-15, 31, 38-45, as amended herein, and new claims 46-49 are presented for consideration. The Applicant thanks the Examiner for providing citations of the Brandwajn et al, Ornstein and Wang patents as pertinent to the Applicant's disclosure.

The Examiner rejects claims 1-45 under 35 U.S.C. §101 as not covering statutory subject matter. The Guidelines For Subject Matter Patentability, published by the U.S.P.T.O. on 22 November 2005 in the Official Gazette, discuss consideration of "Practical Application By Physical Transformation," noting that the claimed invention, in order to qualify as covering statutory subject matter, can transform an article of physical object to a different state or thing. The Guidelines further note that

"The examiner first shall review the claim and determine if it provides a transformation or reduction of an article to a different state or thing. If the examiner finds such a transformation or reduction, the examiner shall end the inquiry and find that the claim meets the statutory requirement of 35 U.S.C. Sec. 101. If the examiner does not find such a transformation or reduction, the examiner has not determined as a final matter that the claim is non-statutory. The examiner must proceed in further inquiry."

Independent method claims 1 and 11 and independent apparatus claims 31 and 41 are rewritten here to recite provision of a computer that is programmed to receive training data, including at least one of archived data, simulated nominal data and off-nominal data, or to receive at least one monitored-system vector having monitored-system parameters, and to perform certain cluster analysis operations on the received data, such as (i) generating a database of clusters associated with particular ranges of values for parameters in the clusters, (ii) determining a distance between a test vector (not in any cluster)

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and a nearest cluster, and (iii) normalizing this distance by dividing by a value representing a range of values of at least one parameter in the cluster.

The computer, in performing these operations according to its programming, transforms a collection of unorganized data into a sequence of clusters of the data, organized according to ranges of values of parameters that are part of the data. After such transformation, the data within a given cluster are related to each other, through relationships of the parameters and/or adjacent or overlapping ranges of the parameter values. In effect, the programmed computer creates order where the data were originally unorganized or even chaotic. The Applicant believes that performance of these operations on the data qualifies as "transformation" of an article or physical object to a different state or thing. The Applicant requests that the Examiner withdraw the Section 101 rejection of the claims 1, 3, 8-12, 14-15, 31, 38-45, as amended herein, and new claims 46-47, and proceed with examination of the application on its merits.

Respectfully Submitted,

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